

IV. REMARKS

1. Claims 4, 9, 12 and 15 are amended to correct typographical errors and antecedent basis errors. The changes do not limit or narrow the scope of the claims. Claims 23-30 are new.

2. Claims 14, 16 and 21 are withdrawn without prejudice, with claims 1-13, 15, 17-20 and 22 being elected for further prosecution.

3. The Examiner indicates that the feature "providing a communications link...not being a link of the telecommunications network" as recited in claim 5 is not disclosed in the specification.

It is respectfully submitted that this feature is disclosed in for example, FIG. 1, wherein it is shown that the AP is communicating with RF1 (WLAN adapter) (See also e.g. page 18, lines 7-8). The specification is also amended to include the specific language of claim 5, as provided for in the M.P.E.P.

4. In paragraph 11 of the detailed action, the Examiner indicates that claims 4 and 12 are rejected under 35 U.S.C. §112, second paragraph as being indefinite. However, it is not clear from the Detailed Action as to why the Examiner finds the claims indefinite. If it is for the antecedent basis errors noted in paragraphs 13 and 14, those have been addressed. Clarification is requested.

5. Claims 1, 3-5, 8-10, 13, 19, 20 and 22 are not unpatentable over "Protection in Mobile Communications" ("Federrath") in view

of Handbook of Applied Cryptography ("Menezes") under 35 U.S.C. §103(a).

Claim 1 recites authenticating a mobile node to a packet data network. This is not disclosed or suggested by Federrath. Federrath does not disclose or suggest a packet data network. Federrath merely deals with the theft of, or stealing, authentication information from a mobile node in order to authenticate an attacker to the victim's mobile communication network. FIG. 1 of Federrath is fundamentally different from Applicant's invention. FIG. 1 of Federrath illustrates the interaction of security functions using location update. What Federrath does not illustrate or show is authenticating a mobile node to a packet data network.

Menezes also does not disclose or suggest authenticating a mobile node to a packet data network. Menezes does not address anything other than common authentication technologies. Thus, the combination of Federrath and Menezes cannot teach a method for authenticating a mobile node to a packet data network as claimed by Applicant, and obviousness under 35 U.S.C. §103(a) is not established.

Since neither Federrath nor Menezes teach or suggest authenticating a "mobile node" to a "packet data network", there is no motivation to combine reference teachings to achieve Applicant's invention.

In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or combine reference teachings. There must also be a

reasonable expectation of success, and the reference(s), when combined, must teach or suggest all of the claim limitations. (See M.P.E.P. §2142). As noted above, Federrath in view of Menezes does not disclose or suggest each feature of Applicant's invention as claimed. Thus, at least for that reason a *prima facie* case of obviousness cannot be established.

Applicants also submit that there is no suggestion or motivation to modify the references as proposed by the Examiner. The Examiner's proposition that Applicants' invention would be obvious as recited in the claims is not supported by the factual contents of Federrath and Menezes. The references themselves and/or the knowledge generally available to one of skill in the art does not provide the requisite motivation or suggestion to modify the references as proposed for purposes of 35 U.S.C. §103(a). When "the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference". In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). As noted, neither Federrath nor Menezes discloses or suggests authenticating a mobile node to a packet data network. Federrath only addresses stealing authentication information from the mobile node in order to authenticate the attacker to the victim's mobile communication network. Nowhere does Federrath teach authenticating the mobile node to a packet data network as claimed by Applicant. Menezes is similarly deficient. Thus, there is nothing in either reference to suggest the combination. It is respectfully submitted that any such motivation or suggestion might only come from hindsight knowledge of Applicant's invention. There is no such suggestion that can be found in either of the references, without knowledge of Applicant's invention. The Examiner is requested to provide an

indication as to where any such teaching, suggestion or motivation appears in the references. Absent such a teaching, it is submitted that a *prima facie* case of obviousness over Federrath and Menezes under 35 U.S.C. §103(a) is not established.

Thus, claims 1, 13, 19 and 20 are not disclosed or suggested by Federrath and Menezes. Claims 3-5, 8-10 and 22 should at least be allowable in view of their respective dependencies.

5. Claim 2 is not unpatentable over Federrath in view of Menezes and further in view of "The Network Access Identifier" ("Aboba") under 35 U.S.C. §103(a).

Claim 2 should be allowable at least in view of its respective dependency.

6. Claims 6 and 7 are not unpatentable over Federrath in view of Menezes and further in view of Brown et al. ("Brown") (U.S. Patent No. 5,537,474) under 35 U.S.C. §103(a). Claims 6 and 7 should also be allowable at least by reason of their respective dependencies.

7. Claim 12 is not unpatentable over Federrath in view of Menezes and further in view of "Internet Key Exchange (IKE)" ("Harkins") under 35 U.S.C. §103(a). Claims 4 and 12 should also be allowable in view of their respective dependencies.

8. Claims 15, 17 and 18 are not unpatentable of WO 01/41470 to Abrol et al. ("Abrol") under 35 U.S.C. §103(a).

Claim 15 is directed to a "network entity" for acting as an interface between a packet data network and a telecommunications network. No such disclosure is made in Abrol.

Unlike Abrol, claim 15 defines a network entity that communicates with an authentication server of the telecommunications network (accessible to its secrets) and not only passes information between a mobile node and an authentication server, but further processes that information such that:

a) the network entity inputs a protection code for the mobile node, and

b) the network receives a challenge and session secret corresponding to the mobile node identity from the authentication server and forms cryptographic information using at least the protection code and the session secret, and

c) subsequently receives a first response corresponding to the challenge, based on a shared secret specific to the subscriber identity and known by the mobile node and the telecommunications network, from the mobile node via the packet data network, and verifies the first response for authenticating the mobile node.

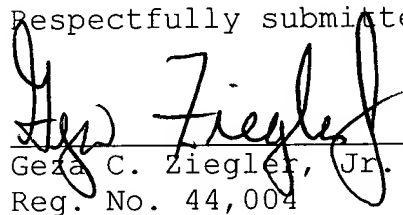
Thus, claims 15, 18 and 18 are not unpatentable over Abrol.

9. Applicant appreciates the Examiner's indication of allowable subject matter in claim 11 (paragraph 21).

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A check in the amount of \$700 is enclosed for a two-month extension of time as well as 5 additional claims (8 new less 3 withdrawn for a total of 5 new claims not previously paid for.) No fees are due for the two (2) new independent claims, since withdrawn claims 14, 16 and 21 were independent. Thus, the total number of independent claims pending remains less than what was previously paid for. The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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